

Appl. No. 9/639,868
Amendment dated May 3, 2004
Reply to Office Action of April 22, 2004

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

Claims 1-6 Cancelled

7 (Currently Amended): A gas infusion system for dissolving a gas into solution in a liquid, comprising:

a tank having a top end, a bottom end and a sidewall extending there between defining a tank interior, the tank having a liquid inlet, a gas inlet, and a liquid outlet, the liquid inlet for connection to a source of the liquid, the gas inlet for connection to a pressurized source of the gas for admitting thereof into the tank interior so that the gas goes into solution into the liquid, and the outlet for delivering the liquid having the gas in solution therein to a dispensing means, a level sensor mounted to the tank and having an internal level sensing portion in the tank interior for sensing the level of the ~~fluid~~ liquid therein for determining a full liquid level and a minimum liquid level and having a contact end external of the tank for connection to a control means for regulating admission of the ~~combined liquid and the gas~~ into the tank interior as a function of the sensed level of the ~~combined fluid liquid~~ liquid therein and the level sensor level sensing portion including a ~~fluid liquid~~ liquid contact plate extending there from at an angle transverse to a direction of flow of the liquid entering into the tank interior through the ~~fluid liquid~~ liquid inlet and the ~~fluid liquid~~ liquid inlet and ~~fluid liquid~~ liquid contact plate positioned so that the entering ~~fluid liquid~~ liquid contacts the ~~fluid liquid~~ liquid contact plate for diffusing any force of the flow thereof for minimizing any disruptive contact thereof with the operation of the flow level sensing portion ~~and/or for facilitating better~~

Appl. No. 9/639,868
Amendment dated May 3, 2004
Reply to Office Action of April 22, 2004

~~dissolving of the gas into solution in the liquid.~~

8 (Currently Amended): The gas infusion system as defined in claim 7, and the gas inlet having a diffuser in fluid communication therewith and located within the tank interior at a level generally below ~~a predetermined~~ the minimum liquid level so that gas entering the tank interior is finely mixed with the ~~combined~~ liquid.

9 (Currently Amended): The gas infusion system as defined in claim 7, and the liquid outlet having a tube portion extending there from within the tank interior and terminating closely adjacent the tank bottom end and including a baffle plate positioned within the tank interior above the tank bottom end and below ~~a predetermined~~ the minimum liquid level and the baffle plate including a first hole for the liquid outlet tube portion to extend there through and the baffle plate having a plurality of secondary holes.

10 (Previously Presented): The gas infusion system as defined in claim 7, and where the liquid is water and the gas is carbon dioxide.

11 (Currently Amended): The gas infusion system as defined in claim 8, and the liquid outlet having a tube portion extending there from within the tank interior and terminating closely adjacent the tank bottom end and including a baffle plate positioned within the tank interior above

Appl. No. 9/639,868
Amendment dated May 3, 2004
Reply to Office Action of April 22, 2004

the tank bottom end and below a ~~predetermined~~ the minimum liquid level and the baffle plate including a first hole for the liquid outlet tube portion to extend there through and the baffle plate having a plurality of secondary holes.

12 (Previously Presented): The gas infusion system as defined in claim 11, and where the liquid is water and the gas is carbon dioxide.

13 (Currently Amended): The gas infusion ~~device~~ system as defined in claim 7, and the ~~fluid~~ liquid inlet integral with the ~~fluid~~ liquid level sensor.

14 (New): The gas infusion system as defined in claim 9, and the baffle plate having a single primary flow hole there through larger in area than any one of the secondary holes.

15 (New): The gas infusion system as defined in claim 11, and the baffle plate having a single primary flow hole there through larger in area than any one of the secondary holes.

16 (New): The gas infusion system as defined in claim 7, and where the liquid is a combination of water and beverage syrup and the gas is carbon dioxide.

Appl. No. 9/639,868
Amendment dated May 3, 2004
Reply to Office Action of April 22, 2004

17 (New): The gas infusion system as defined in claim 11, and where the liquid is a combination of water and a beverage syrup and the gas is carbon dioxide.

18 (New): A gas infusion system for dissolving a gas into solution in a liquid, comprising:
a tank having a top end, a bottom end and a sidewall extending there between defining a tank interior, the tank having a liquid inlet, a gas inlet, and a liquid outlet, the liquid inlet for connection to a source of the liquid, the gas inlet for connection to a pressurized source of the gas for admitting thereof into the tank interior so that the gas goes into solution into the liquid, and the outlet for delivering the liquid having the gas in solution therein to a dispensing means, a level sensor mounted to the tank and having an internal level sensing portion in the tank interior for sensing the level of the liquid therein for determining a full liquid level and a minimum liquid level and having a contact end external of the tank for connection to a control means for regulating admission of the liquid into the tank interior as a function of the sensed level of the liquid therein and the level sensor level sensing portion including a liquid contact plate extending there from at an angle transverse to a direction of flow of the liquid entering into the tank interior through the liquid inlet and the liquid inlet and liquid contact plate positioned so that the entering liquid contacts the liquid contact plate for diffusing any force of the flow thereof for minimizing any disruptive contact thereof with the operation of the level sensing portion, and a baffle plate positioned within the tank interior above the tank bottom end and below the minimum liquid level

Appl. No. 9/639,868
Amendment dated May 3, 2004
Reply to Office Action of April 22, 2004

and the baffle plate including a primary flow hole and a plurality of secondary flow holes wherein the primary flow hole is larger in area than any one of the secondary holes.

19 (New): The gas infusion system as defined in claim 18, and the gas inlet having a diffuser in fluid communication therewith and located within the tank interior at a level generally below the minimum liquid level so that gas entering the tank interior is finely mixed with the liquid.

20 (New): The gas infusion system as defined in claim 19, and the liquid outlet having a tube portion extending there from within the tank interior and terminating closely adjacent the tank bottom end and the baffle plate including an outlet tube hole for the liquid outlet tube portion to extend through.

21 (New): The gas infusion system as defined in claim 18, and where the liquid is water and the gas is carbon dioxide.

22 (New): The gas infusion system as defined in claim 18, and where the liquid is a combination of water and a beverage syrup and the gas is carbon dioxide.

Appl. No. 9/639,868
Amendment dated May 3, 2004
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23 (New): The gas infusion system as defined in claim 18, and the liquid inlet integral with the liquid level sensor.